

## **Gear Reduction Starter Notes and Installation Tips**

Part Numbers 17-3998, 17-3999, 17-4000, 17-4001 & 17-4002

**Q: Will I have to make permanent modifications to the vehicle to fit this starter?**

A: No.

**Q: My early Jaguar has a remote-mount starter solenoid? Can I keep it?**

A: Yes, but you will need to make a jumper wire. (See below for more information.)

**Q: What is the warranty?**

A: One year from time of purchase.

**Q: Are these starters new or rebuilt?**

A: They are *factory remanufactured*, not rebuilt. There is a big difference. Virtually every aftermarket starter on the market, even those professing to be new, is remanufactured.

**Q: The pinion gear on the gear-reduction starter differs from original. Will it work?**

A: Yes. The most common application is a 1" diameter, 9-tooth pinion. The gear-reduction starters use a slightly larger 11-tooth pinion instead. This is exactly what the auto manufacturers did when they used this same starter, and it has some advantages in torque transfer because of its superior tooth form. We have sold hundreds of these starters and have installed many in our restoration shop. They work great!

**Q: My original starter has threaded "ears." The gear reduction starter does not. What gives?**

A: That's the way these starters are built, and it actually makes them far easier to install. For your convenience, and to facilitate installation, we have included through-bolts and nuts and washers required to install the starter. ***Please note that this does not apply to part numbers 17-3998, 17-3999 and 17-4000, which don't require new hardware.***

**Note to V-12 E-Type owners:** Your car has a starter-bolt access point in the passenger-side foot well. Just pass a socket extension through this hole to tighten or loosen the upper starter bolt. This hole is under the carpet and covered by a rubber grommet. This tip will save you hours of aggravation and the starter swap will take less than 15 minutes with assistance from a second person.

**Q: I've tried to install the starter and it looks like it's not oriented properly relative to the base plate. What do I do?**

A: Because there are multiple installations for a given starter, you may have to rotate, or "clock" the base plate relative to the starter. This is OK and is very easy to do.

**Q: Any other tips?**

A: Before fully tightening the starter to the block, remove the coil wire and engage the starter a few times (you don't want to actually start the engine). This will ensure everything is in proper alignment and the starter will find its own "center." Then fully tighten the starter to the block.

Early Jaguars use a remote starter solenoid usually mounted on the firewall or on the side of the engine bay. The use of this solenoid may be retained by following these easy instructions:



The Nippondenso starter has two electrical terminals and can be used on positive or negative ground cars. We will refer to the terminals as "big" and "little" for clarity. The big terminal has the nut on it while the little terminal (solenoid terminal) has a shielded black cover over a small male (spade) push terminal. With a 4" piece of wire (14 or 16 gauge will do) connect these two terminals together. To do this you will need to buy a female connector to crimp on one end of the wire (goes to the small terminal) and a ring connector for the large terminal

This starter has one large bolted terminal for the positive battery cable from your vehicle. There is also a second small solenoid terminal (1/4" male spade connector) which connects to the wire from your vehicle's ignition switch.